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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,365

10/12/2005

Atsushi Miyawaki

P26794

5201

7055 7590 03/30/2007  
GREENBLUM & BERNSTEIN, P.L.C.  
1950 ROLAND CLARKE PLACE  
RESTON, VA 20191

EXAMINER

MONSHIPOURI, MARYAM

ART UNIT

PAPER NUMBER

1656

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
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3 MONTHS

03/30/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/30/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
pto@gbpatent.com

**Office Action Summary**

Application No.

10/525,365

Applicant(s)

MIYAWAKI ET AL.

Examiner

Maryam Monshipouri

Art Unit

1656

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 1-20, 22-24 and 27-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21, 25, 26 and 31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date filed 2/07, 6/06, 10/05.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: see attachment

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Applicant's response to restriction requirement filed 1/27/2007 is acknowledged. Applicant elected Group XII (claims 21, 25, 26 and 31) with traverse. Claims 1-20, 22-24, 27-30 are hereby withdrawn as drawn to non-elected invention.

In traversal of restriction held between Groups V and XII, applicant points out that polypeptide and DNA claims should be linkable as indicated in PCT international search and examination guidelines, Part III. chapter 10, which teaches that said products share corresponding technical feature and accordingly unity of invention is present between Groups V and XII of this application.

This argument was fully considered but was found **unpersuasive** because the examiner respectfully disagrees with applicant that said PCT international search guidelines require that in every case DNA and its expression product share a common special technical feature and should be examined together. In the instant case, as mentioned previously, the special technical feature of Group V is a polypeptide with entirely different structure and function than the special technical feature of Group XII, which is DNA. Each of said special technical features is capable of being made or used independently of each other and therefore the examiner maintains that restriction as indicated previously, between Groups V and XII, is in compliance with Patent Rule section 1.475, is still proper and is hereby made **Final**.

#### DETAILED ACTION

Claims 21, 25-26 and 31 are under examination on the merits.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 21, 25-26 and 31 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Said claims read on wild type fluorescent protein from sea anemone (*Tracyphyllia geoffroyi*) which is a product of nature and is therefore unpatentable. Applicant may overcome this rejection by recitation of the term "isolated" or "purified" at the beginning of claim 21. Claims 25-26 and 31 are merely rejected from depending from base claim 21.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 21, 25, 26 are rejected under 35 U.S.C. 102(a) as being anticipated by Ando et al. (PNAS USA, 99(20), 12651-6m, 2002). It is noted that applicant has claimed foreign priority. However, applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15. In view of the absence of certified translation of foreign priority documents Ando teaches a DNA sequence encoding SEQ ID NO:6 of this invention, anticipating claim 21. Ando also teaches vectors and host cells comprising said products, activating claims 25-26.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

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351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 21, 25-26 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Falkowski et al. (U.S. Patent No. 6,933,375, issued 8/2005). Falkowski teaches a DNA sequence (see its SEQ ID NO:1 in the attached sequence alignment) encoding an amino acid sequence comprising a deletion, substitution and/or addition of several amino acids with respect to SEQ ID NO:5, wherein said amino acid sequence is a fluorescent protein, anticipating claim 21 (b) and (d). Falkowski also claims vectors and host cells comprising said DNA sequence, anticipating claims 25-26. In column 3, Falkowski teaches about kits comprising its DNA sequence, anticipating claim 31.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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Claim 21 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 5 and 8 of copending U.S.

Application No. 10/581,551 (cited in the IDS). Although the conflicting claims are not identical, they are not patentably distinct from each other because the scope of claims 5 and 8 in said application embrace the scope of claim 21 of this invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim 21 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 17-19 of copending U.S.

Application No. 10/581,041 (cited in the IDS). Although the conflicting claims are not identical, they are not patentably distinct from each other because the scope of claims 17-19 in said application embrace the scope of claim 21 of this invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**No claim is allowed.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maryam Monshipouri whose telephone number is (571) 272-0932. The examiner can normally be reached on 7:00 a.m to 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathleene Kerr Bragdon can be reached on (571) 272-0931. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

M Monshipouri  
Maryam Monshipouri Ph.D.

Primary Examiner

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2	803	65.7	801	3	US-09-459-956-7	Sequence 7, Appli
3	633	51.8	699	3	US-09-459-956-5	Sequence 5, Appli
4	608.5	49.8	678	5	US-10-209-208-5	Sequence 5, Appli
5	608.5	49.8	681	5	US-10-209-208-7	Sequence 7, Appli
6	599.5	49.1	678	3	US-09-459-956-6	Sequence 6, Appli
7	599.5	49.1	678	4	US-10-081-864A-7	Sequence 7, Appli
8	599.5	49.1	678	5	US-10-209-208-2	Sequence 2, Appli
9	599.5	49.1	681	5	US-10-209-208-3	Sequence 3, Appli
10	599.5	49.1	681	5	US-10-209-208-23	Sequence 23, Appli
11	599.5	49.1	723	3	US-10-152-296-1	Sequence 1, Appli
12	599.5	49.1	859	3	US-09-866-538-11	Sequence 11, Appli
13	599.5	49.1	859	3	US-09-865-291-11	Sequence 11, Appli
14	599.5	49.1	859	5	US-09-794-308-11	Sequence 11, Appli
15	599.5	49.1	6984	3	US-10-001-189-45	Sequence 45, Appli
16	594.5	48.6	678	4	US-10-081-864A-11	Sequence 11, Appli
17	593.5	48.6	678	4	US-10-081-864A-14	Sequence 14, Appli
18	588.5	48.2	675	4	US-10-081-864A-13	Sequence 13, Appli
19	575.5	47.1	678	5	US-10-209-208-9	Sequence 9, Appli
20	569.5	46.6	678	5	US-10-209-208-80	Sequence 80, Appli
21	560.5	45.9	690	3	US-09-459-956-2	Sequence 2, Appli
22	559.5	45.8	690	4	US-10-081-864A-19	Sequence 19, Appli
23	558.5	45.7	696	3	US-09-459-956-4	Sequence 4, Appli
24	558.5	45.7	865	4	US-10-081-864A-5	Sequence 5, Appli
25	555.5	45.5	705	4	US-10-081-864A-17	Sequence 17, Appli
26	553.5	45.3	687	4	US-10-081-864A-1	Sequence 1, Appli
27	548	44.8	696	3	US-09-459-956-3	Sequence 3, Appli
28	546	44.7	693	4	US-10-081-864A-3	Sequence 3, Appli
29	545	44.6	705	4	US-10-081-864A-15	Sequence 15, Appli
30	534	43.7	696	4	US-10-081-864A-9	Sequence 9, Appli
31	519	42.5	707	4	US-10-081-864A-21	Sequence 21, Appli
32	509	41.7	654	4	US-10-081-864A-23	Sequence 23, Appli
33	480.5	39.3	1104	3	US-09-277-716-30	Sequence 30, Appli
34	480.5	39.3	1104	3	US-09-609-161B-30	Sequence 30, Appli
35	480.5	39.3	1279	3	US-09-277-716-31	Sequence 31, Appli
36	480.5	39.3	1279	3	US-09-609-161B-31	Sequence 31, Appli
37	473.5	38.7	720	3	US-09-839-650-1	Sequence 1, Appli
38	473.5	38.7	720	3	US-10-652-703A-1	Sequence 1, Appli
39	473.5	38.7	720	3	US-10-021-818A-3	Sequence 3, Appli
40	473.5	38.7	1079	3	US-09-609-161B-15	Sequence 15, Appli
41	473.5	38.7	1079	3	US-09-626-581D-64	Sequence 64, Appli
42	473.5	38.7	1079	3	US-09-415-765B-64	Sequence 64, Appli
43	473.5	38.7	1079	3	US-09-626-580C-64	Sequence 64, Appli
44	473.5	38.7	1085	3	US-09-277-716-15	Sequence 15, Appli
45	471.5	38.6	1482	3	US-09-977-897-1	Sequence 1, Appli

Attachment

# ALIGNMENTS

## RESULT 1

US-10-244-779-1  
; Sequence 1, Application US/10244779  
; Patent No. 6933375  
; GENERAL INFORMATION:  
; APPLICANT: Falkowski, Paul  
; APPLICANT: Sun, Yi  
; APPLICANT: Gorbunov, Maxim  
; APPLICANT: Wyman, Kevin  
; APPLICANT: Chen, Yi-Bu  
; TITLE OF INVENTION: mCFP Encoding Nucleic Acids,  
; TITLE OF INVENTION: Polypeptides, Antibodies and Methods of Use Thereof  
; FILE REFERENCE: Rut 00-0023US  
; CURRENT APPLICATION NUMBER: US/10/244,779  
; CURRENT FILING DATE: 2002-12-19  
; PRIOR APPLICATION NUMBER: 60/322,189  
; PRIOR FILING DATE: 2001-09-14  
; NUMBER OF SEQ ID NOS: 6  
; SOFTWARE: FastSEQ for Windows Version 3.0  
; SEQ ID NO 1  
; LENGTH: 860  
; TYPE: DNA  
; ORGANISM: Montastrea cavernosa  
US-10-244-779-1

## Alignment Scores:

Pred. No.:	4.16e-104	Length:	860
Score:	809.00	Matches:	153
Percent Similarity:	80.5%	Conservative:	29
Best Local Similarity:	67.7%	Mismatches:	42
Query Match:	66.2%	Indels:	2
DB:	3	Gaps:	2

US-10-525-365-5 (1-225) x US-10-244-779-1 (1-860)

Qy	1	MetSerLeuIleLysProGluMetLysIleLysLeuLeuMetGluGlyAsnValAsnGly	20
Db	135	ATGAGTGTGATTAATCAGTCATGAAATCAAGCTGCGTATGGACGCCATTGTAACGGG	194
Qy	21	HisGlnPheValIleGluGlyAspGlyLysGlyHisProPheGluGlyLysGlnSerMet	40
Db	195	CACAAGTTCATGATTACAGGAGAAGGTGAAGCAAGCCTTTCGAGGGAACACACACTATA	254



Qy	41	AspLeuValValLysGluGlyAlaProLeuProPheAlaTyrAspIleLeuThrThrAla	60
Db	255	ATACTTAAAGTCAAAAGAAGCGGACCTTCGCTTTCGCTACGACATCTTGACAAACAGCA	314
Qy	61	PheHisTyrGlyAsnArgValPheAlaLysTyrProAspHisIleProAspTyrPheLys	80
Db	315	TTTCAGTACGGCAACAGGGTATTTCACCAAAATACCCAAAAGACATACCAGACTATTTCAAG	374
Qy	81	GlnSerPheProLysGlyPheSerTrpGluArgSerLeuMetPheGluAspGlyGlyVal	100
Db	375	CAGTCGTTTCTCGAGGGGTATTCTGGGAAAGAACGATGACTTTCGAAGACCAGGGCGTT	434
Qy	101	CysIleAlaThrAsnAspIleThrLeuLysGlyAspThrPhePheAsnLysValArgPhe	120
Db	435	TGCACCGTCACAAGCGCACATAAAGTTGGAAGGCGACTGTTTTTCTACGAAATTCGATTT	494
Qy	121	AspGlyValAlsnPheProProAsnGlyProValMetGlnLysLysThrLeuLysTrpGlu	140
Db	495	TATGGTGTGAACTTTCCCTCCAGTGGTCCAGTTATGCAGAAGAAGACGCTGAAATGGGAG	554
Qy	141	AlaSerThrGluLysMetTyrLeuArgAspGlyValLeuThrGlyAspIleThrMetAla	160
Db	555	CCATCCACTGAGAATATGTACGTGCGTGATGGAGTGCTACTGGGGGATGTTAGCAGGACG	614
Qy	161	LeuLeuLeuLysGlyAspValHisTyrArgCysAspPheArgThrThrTyrLysSerArg	180
Db	615	CTGTTGCTTGAAGGGGATAAACATCCCGATGTAACTTCAGAAGTACTTACGGGGCAAG	674
Qy	181	GlnGluGlyValLysLeuProGlyTyrHisPheValAspHisCysIleSerIleLeuArg	200
Db	675	---AAGGGTGTCTGTTGCCAGAATATCATTGTGGACCACCGAATTGAAATTCGAGC	731
Qy	201	HisAspLysAspTyrAsnGluValLysLeuTyrGluHisAlaValAlaHis---SerGly	219
Db	732	CATGACAAAGATTACACACCGTTGAGGTGTATGAGAATGCCGTTGCTCGCCCTTCTATG	791
Qy	220	LeuProAspAsnValLys	225
Db	792	CTGCCGGTTAAGGCCAAG	809

## RESULT 2

US-09-459-956-7

: Sequence 7. Application US/09459956

: Patent No. 6342379

## : GENERAL INFORMATION:

: APPLICANT: Tsien, Roger Y.

APPLICANT: Gonzalez, III, Jesus E.

TITLE OF INVENTION: DETECTION OF TRANSMEMBRANE POTENTIALS BY

TITLE OF INVENTION: OPTICAL METHODS

FILE REFERENCE: BEGEN1290-4

CURRENT APPLICATION NUMBER: US/09/459,956

CURRENT FILING DATE: 1999-12-13

PRIOR APPLICATION NUMBER: 08/755 860

PRIOR FILING DATE: 1988 05 08

PRIOR APPLICATION NUMBER: 08/181,877

PRIOR APPLICATION NUMBER: 087  
PRIOR FILING DATE: 1985-06-07

PRIOR APPLICATION NUMBER: PCT/US96/08553

PRIOR APPLICATION NUMBER: PCI  
PRIOR FILING DATE: 1996-05-05

; PRIOR FILING DATE: 1998-  
 NUMBER OF SEQ. ID NOS. 32

; NUMBER OF SEQ ID NOS: 22  
SOFTWARE: FastTree for Windows Version 1.0

; SOFTWARE:

; SEQ ID NO 7

; LENGTH: 8

; TYPE: DNA

; ORGANISM: C

Alignment Scores:

Alignment Scores:			
Pred. No.:	2.62e-103	Length:	801
Score:	803.00	Matches:	147
Percent Similarity:	82.4%	Conservative:	36
Best Local Similarity:	66.2%	Mismatches:	37
Query Match:	65.7%	Indels:	2
DB:	3	Gaps:	2

US-10-525-365-5 (1-225) x US-09-459-956-7 (1-801)

Qy 1 MetSerLeuIleLysProGluMetLysIleLysLeuLeuMetGluGlyAsnValAsnGly 20  
Db 127 ATGGGTGTGATTAAACCAGACATGAAGATTAAAGCTGAAGTGAAGGAAGTGTAAACCGG 186

Qy 21 HisGlnPheValIleGluGlyAspGlyLysGlyHisProPheGluGlyLysGlnSerMet 40  
Db 187 CATGCTTTTGTGATCGAAGGAGAAGGAGAAGGAAAGCCTTACGATGGGACACACACTTTA 246

Qy 41 AspLeuValValLysGluGlyAlaProLeuProPheAlaTyrAspIleLeuThrThrAla 60  
Db 247 AACCTGGAAGTGAAGGAAGGTGCGCCTCTGCCCTTTTCTTACGATATCTTGTCAAACGCG 306

Qy 61 PheHisTyrGlyAsnArgValPheAlaLysTyrProAspHisIleProAspTyrPheLys 80  
Db 307 TTCCAGTACGGAACAGAGCATTGACAAAATACCCAGACGATATAGCAGACTATTTCAAG 366